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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,244	10/09/2003	Armen N. Abazajian	41290-12USPT	1005

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EXAMINER
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MCAVOY, ELLEN M

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/682,244

Applicant(s)

ABAZAJIAN ET AL.

Examiner

Ellen M. McAvoy

Art Unit

1764

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                        |                                                                   |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. ____                                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5 pages</u> .                                                 | 6) <input type="checkbox"/> Other: ____                           |

***Claim Rejections - 35 USC § 112***

Claims 6 and 14-18 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 6 there is no proper antecedent basis for *the* synthetic fuel and *the* Fischer-Tropsch reaction feed syngas in claim 5 from which claim 6 depends. Claim 5 is drawn to the hydrocarbon mixture of claim 1.

In claims 14-18, there is no proper antecedent basis for *the* synthetic fuel of claim 13. Claim 13 is drawn to a hydrocarbon mixture, and not to a synthetic fuel.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-5, 13-18, 26-29 and 34-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over O'Rear et al (6,933,323).

O'Rear et al ["O'Rear"] disclose (a) a stable, low sulfur, olefinic distillate fuel fraction from a Fischer-Tropsch process which comprises olefins in an amount of 2 to 80 weight percent, non-olefins in an amount of 20 to 98 weight percent which are predominantly paraffins, oxygenates in an amount of less than 1 weight percent, and sulfur in an amount of less than 10

ppm by weight. The distillate fuel fraction may be blended with (b) a distillate fuel fraction selected from the group consisting of a hydrotreated Fischer-Tropsch derived distillate fuel, a hydrocracked Fischer-Tropsch derived distillate fuel, a hydrotreated petroleum derived distillate fuel, a hydrocracked petroleum derived distillate fuel, and mixtures thereof. See column 4, lines 48 to column 6, line 14. The products of the Fischer-Tropsch processes may range from C<sub>1</sub> to C<sub>200+</sub> with a majority in the C<sub>5</sub> to C<sub>100+</sub> range. See column 8, lines 55-56. The examiner is of the position that O'Rear meets the limitations of the olefin/paraffin mixture of the claims. Although a ratio of terminal monomethyl branching to internal monomethyl branching is not set forth in O'Rear, O'Rear allows for branching of the paraffins. See column 6, lines 63-64, wherein the term "paraffin" means a saturated straight or branched chain hydrocarbon. Additionally, O'Rear teaches an i/n ratio (isoparaffin/normal paraffin weight ratio) of less than 1 so that up to 50% of the paraffins may be branched which meets the limitation of the claims.

### ***Claim Rejections - 35 USC § 102/103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claims 7-12, 19-25, 30-36 are rejected under 35 U.S.C. 102(a) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over O'Rear et al (6,768,035).

O'Rear et al ["O'Rear"] disclose a process for converting Fischer-Tropsch olefin-containing light fractions into high octane alkylates. The process includes the steps of (a) recovering a light olefin product stream from a Fischer-Tropsch reactor, (b) contacting the olefin stream with a dehydrating/isomerizing catalyst to dehydrate oxygenates in the olefin stream, (c) hydrocracking, (d) blending the product streams of (b) and (c), (e) alkylating the blend and (f) recovering a highly branched, isoparaaffinic alkylate having a research octane number greater than 80. The examiner is of the position that the process of O'Rear meets the limitations of the process for producing a synthetic fuel of claims 7-12 and 19-24 since the process steps may be the same.

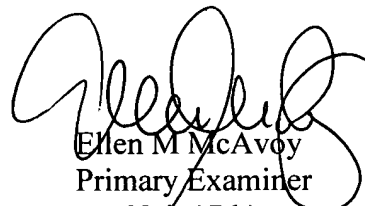
### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicants' disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ellen M. McAvoy whose telephone number is (571) 272-1451. The examiner can normally be reached on M-F (7:30-5:00) with alt. Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Ellen M. McAvoy  
Primary Examiner  
Art Unit 1764

EMcAvoy  
September 25, 2006